

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE CONSTRUCTION OF A FULL-COLOR TRAFFIC SIGNAL AT THE INTERSECTION OF MD 197 (COLLINGTON ROAD) AT EVERGREEN PARKWAY. THE INSTALLATION INCLUDES LED SIGNAL HEADS, IP-BASED VIDEO DETECTION CAMERAS, LED COUNTDOWN PEDESTRIAN SIGNAL HEADS, APS PUSHBUTTONS AND SIGNS. MD 197 IS ASSUMED TO RUN IN AN NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE FULL-TRAFFIC-ACTUATED MODE WITH AN ALTERNATE PEDESTRIAN PHASE FOR THE NORTH LEG AND CONCURRENT PEDESTRIAN PHASE FOR THE WEST LEG OF THE INTERSECTION. THE MD 197 NORTHBOUND LEFT TURN OPERATE IN EXCLUSIVE-PERMISSIVE PHASING.

CONTROLLER REQUIREMENTS

A FULL-TRAFFIC-ACTUATED EIGHT-PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET WITH TELEMETRY CABLE SHALL BE FURNISHED BY SHA AND INSTALLED BY THE CONTRACTOR. A 2-WIRE APS CENTRAL CONTROL UNIT SHALL BE FURNISHED BY THE CONTRACTOR AND INSTALLED BY SHA. IP-BASED VIDEO DETECTION INTERFACE EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY SHA.

SPECIAL NOTES

APS WILL FUNCTION AS FOLLOWS:

TO CROSS MD 197 (COLLINGTON ROAD):

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL BE "WAIT TO CROSS COLLINGTON AT EVERGREEN. WAIT."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS EVERGREEN ROAD:

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EQUIPMENT LIST "A, B & C"

A. EQUIPMENT TO BE SUPPLIED BY SHA.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
900000	CONTROLLER CABINET, SIZE "S" W/CTRL, VIDEO INT. 1-8 CAM	EA	1
900000	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN	SF	50
	1 - M1-5(4) 78"x36" 1 - D-3(1) (DUAL FACE) 96"x16"		
	1 - R4-7 24"x30" 4 - R10-3(1) 9"x15"		
900000	4 CHANNEL DETECTOR AMPLIFIER	EA	2

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203030	TEST PIT EXCAVATION	CY	4
504428	HOT MIX ASPHALT SUPERPAVE 25.0MM FOR FULL DEPTH PATCH,PG64-22, LEVEL-2	TON	11
585405	5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	LF	30
585621	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	365
585625	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	LF	130
634310	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 10 INCH DEPTH	SF	286
655105	5 INCH CONCRETE SIDEWALK	SF	1121
655120	DETECTABLE WARNING SURFACE FOR CURB RAMPS	SF	76
800000	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD	EA	4
800000	IP-BASED VIDEO DETECTION CAMERA AND CABLE	EA	2
800000	2-WIRE APS CENTRAL CONTROL UNIT	EA	1
800000	AUDIBLE / TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGN	EA	4
800000	REMOVAL AND DISPOSAL OF EXISTING TRAFFIC SIGNAL MATERIALS AND EQUIPMENT	LS	1
800000	8 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	3
800000	LED ROADWAY LUMINAIRE	EA	2
800000	DISCONNECT, PULLBACK & REROUTE CABLE	LF	1100
800000	CABLE - 1 CONDUCTOR, 250 KCMIL, TYPE USE, 600V	LF	1650
801004	CONCRETE FOR SIGNAL FOUNDATION	CY	10
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	1870
805115	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED	LF	135
805118	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED	LF	285
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	215
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	1525
805140	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	50
807500	EMBEDDED METERED SERVICE PEDESTAL	EA	1
810601	NONINVASIVE DETECTOR, 500 FOOT LEAD IN CABLE	EA	3
810605	NONINVASIVE DETECTOR, 1000 FOOT LEAD IN CABLE	EA	3
811001	FURNISH AND INSTALL ELECTRICAL HANDHOLE	EA	10
813014	INSTALL GROUND MOUNTED SIGN	SF	9
813015	INSTALL OVERHEAD SIGN	SF	41
818004	10 FOOT BREAKAWAY PEDESTAL POLE	EA	4
818021	STEEL POLE WITH TWIN 50 FOOT MAST ARM	EA	1
818052	STEEL POLE WITH SINGLE 70 FOOT MAST ARM	EA	1
832016	CABLE - 1 CONDUCTOR, NO 6 AWG, TYPE USE, 600V	LF	70
837001	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH	EA	9
860284	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION	EA	22
860292	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE	EA	1
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	1130
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	1225
861108	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)	LF	610
861116	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG)	LF	410
866104	20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE	EA	2
871202	INSTALL CONTROLLER AND CABINET - BASE MOUNT	EA	1

C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASING CHART

	1	2	3	4	5	6	7	8	9	10	11
	(R)	(R)	(Y)	(R)	(R)	(Y)	(R)	(R)	(R)	(R)	(R)
	(Y)	(Y)	(G)	(Y)	(Y)	(G)	(Y)	(Y)	(Y)	(Y)	(Y)
	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)
PHASE 2 AND 5	R	R	G	G	G	R	R	DW	DW	DW	DW
5 CHANGE	R	R	G	G	G	R	R	DW	DW	DW	DW
PHASE 2 AND 6	G	G	G	G	G	R	R	DW	DW	WK	WK
PED CLEARANCE	G	G	G	G	G	R	R	DW	DW	FL/DWFL/DW	
2 AND 6 CHANGE	Y	Y	Y	Y	Y	R	R	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	G	G	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	Y	Y	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	R	G	G	WK	WK	DW	DW
PED CLEARANCE	R	R	R	R	R	G	G	FL/DWFL/DW	DW	DW	
4 ALT CHANGE	R	R	R	R	R	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/YFL/YFL/YFL/YFL/YFL/YFL/RFL/R	FL/YFL/YFL/YFL/YFL/YFL/YFL/RFL/R	FL/YFL/YFL/YFL/YFL/YFL/YFL/RFL/R	FL/YFL/YFL/YFL/YFL/YFL/YFL/RFL/R	FL/YFL/YFL/YFL/YFL/YFL/YFL/RFL/R	FL/YFL/YFL/YFL/YFL/YFL/YFL/RFL/R	FL/YFL/YFL/YFL/YFL/YFL/YFL/RFL/R	DARK	DARK	DARK	DARK

GENERAL NOTES

- THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
- ALL UNUSED CABLE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
- UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
- ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS. TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04, THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
- ALL PEDESTAL FOUNDATION TOPS SHALL BE INSTALLED FLUSH WITH SIDEWALK GRADE.
- LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SECTION 4E.09 AND FIGURE 4E.2 AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
- PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
- THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER OF POLE TO CENTER OF POLE.
- PUSHBUTTON ARROWS AND SIGNS ARE TO BE ORIENTED PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
- PROPOSED LUMINAIRES SHALL BE SUPPLIED WITH A PHOTOCELL.
- VIDEO CAMERA LOCATIONS/ALIGNMENT SHALL BE COORDINATED WITH THE SHA ENGINEER.
- 10 FEET OF SLACK SHALL BE PROVIDED IN EACH HANDHOLE FOR INTERCONNECT CABLE.
- NEW SIGNAL WARNING SIGN ASSEMBLIES SHALL BE REMOVED 90 TO 120 DAYS AFTER SIGNAL TURN ON, AT WHICH TIME THE APPROPRIATE ADVANCED STREET NAME SIGNS SHALL BE INSTALLED BY SHA DISTRICT #3.

CONTACT PERSONS FOR DISTRICT #3 ARE AS FOLLOWS:

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SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 197 (COLLINGTON ROAD) AT
EVERGREEN PARKWAY
BOWIE, MARYLAND

REVISIONS		GENERAL INFORMATION SHEET	
		SCALE 1"=20'	DATE NOVEMBER 2012 CONTRACT NO. PG7865277
DESIGNED BY	WFW	COUNTY	PRINCE GEORGE'S
DRAWN BY	WFW	LOGMILE	16019700.72
CHECKED BY	BJG	TIMS NO.	L229
FAP NO.		TOD NO.	
TS NO. 4860-G1	DRAWING	SP-2	OF 2 SHEET NO. OF

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